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PATENT APPLICATION

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IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): APOSTOLOPOULOS, et al.

Confirmation No.: 4609

Application No.: 10/623,013

Examiner: Lee, Chi Ho A.

Filing Date: 07/17/2003

Group Art Unit: 2616

Title: MEDIA COMMUNICATION CONVERTING BURST LOSSES TO ISOLATED LOSSES

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TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 11/5/2007.

☒ The fee for filing this Appeal Brief is $510.00 (37 CFR 41.20).

☒ No Additional Fee Required.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month $120	☐ 2nd Month $460	☐ 3rd Month $1050	☐ 4th Month $1640

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☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of $ 510. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

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Respectfully submitted,

APOSTOLOPOULOS, et al.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant:	APOSTOLOPOULOS et al.	Patent Application	
Application No.:	10/623,013	Group Art Unit:	2616
Filed:	July 13, 2003	Examiner:	Lee, Chi Ho A.

For: MEDIA COMMUNICATION CONVERTING BURST LOSSES TO ISOLATED LOSSES

APPEAL BRIEF

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I. Real Party in Interest

The assignee of the present application is Hewlett-Packard Development Company, L.P.

II. Related Appeals and Interferences

There are no related Appeals or Interferences.

III. Status of Claims

Claims 1-42 are pending. Claims 1-42 are rejected. This Appeal involves Claims 1-42.

IV. Status of Amendments

All proposed amendments have been entered. An amendment subsequent to the Final Action has not been filed.

V. Summary of Claimed Subject Matter-

Independent Claims 1, 16, 28 and 29 of the present application pertain to embodiments of the present invention.

As recited in Claim 1, a "method for transmitting media packets" is described. This embodiment is depicted at least in 9. "Figure 9 is a flowchart of a method 900 for converting burst losses into isolated losses, in accordance with one embodiment of the present invention" (page 22, lines 23-24). "In step 910, in the present embodiment, media data enters an encoder/packetizer (e.g., encoder/packetizer 320 of Figure 3) where it is compressed, encoded and packetized for future transmission" (page 23, lines 5-7). "In step 930, the selected interleaver then adapts the conventional schedule (numerically sequential) into an adapted or reordered schedule based on characteristics of the channel over which the media is to be transmitted. The adapted schedule is selected to convert burst losses that might occur into isolated losses as received, so as to reduce distortion in the media at a receiver end. The channel characteristics can be determined by a channel characteristics estimator/historical data retriever based on channel data received from the receiver end" (page 23, line 26, through page 24, line 4).

As recited in Claim 16, a "schedule adapter" is described. This embodiment is depicted at least in Figure 3. "Figure 3 is a block diagram 300 of a system 305 for converting burst losses in video or other media transmission into effective isolated losses at the receiving end, according to one embodiment of the present invention" (page 7, lines 11-13). "When it is time for the media to be transmitted, interleaver 350 adapts the conventional schedule (numerically sequential) into an adapted schedule. Interleaver 350 is a schedule adapter that, according to one embodiment, may be a hardware device well-known in the art, or it may, according to another embodiment, be a packet scheduler that consists of computer-readable code residing in a memory of sender system 305 and executed by a processor residing at interleaver 350" (page 8, lines 8-14). As described in the instant specification, an embodiment of "the present invention includes a method for reordering the transmission of packets of media data using a reordering device such as interleaver 350" (page 9, lines 2-4). "Channel loss characteristics can then be used for determining an order in which to transmit the packets of data" (page 10, lines 19-21). Furthermore, "[t]he sender's characteristics estimator/historical data retriever 380, upon receipt of the data from the client's channel characteristics accumulator 375, can then determine the pertinent statistics from the information received. The information can then be stored in historical data storage media 390 for future retrieval" (page 11, lines 3-7).

As recited in Claim 28, a "channel characteristics estimator" is described. This embodiment is depicted at least in Figures 3, 6 and 7. "In one embodiment of the present invention, receiver/decoder 365 can gather the applicable statistics and send them back via channel characteristics accumulator 375 to sender's channel characteristics estimator/ historical data retriever 380. Channel characteristics estimator/historical data retriever 380 can then reassess the appropriate interleaver and perhaps select a different one" (page 13, lines 24-28; see also page 17, lines 19-21). "According to one embodiment, the information accumulated may include an average packet loss rate, the number of times different loss events occur, and the average time between loss events. For example, it may include the number of times an isolated loss occurred, the number of bursts of length 2 packets, the number of bursts of length 3 packets, the number of bursts of length 4 packets, etc., as well as the time between losses and the end-to-end delay time" (page 17, lines 22-27). Furthermore, "[a]ccording to one embodiment, the channel loss data includes an average packet loss rate and the number of times different loss events occur. For example, it includes the number of times an isolated packet loss occurred, the number of times sequential losses of packets occurred, the number of bursts of length 2 packets, the number of bursts of length 3 packets, the number of bursts of length 4 packets, etc., the pattern of the packets received and lost, the end-to-end delay in receipt of packets and the time between losses" (page 10, lines 21-27).

As recited in Claim 29, a "computer-usable medium having computer-readable code embodied therein for causing a computer system to perform a method of converting burst losses of media packets" is described. This embodiment is depicted at least in 9. "Figure 9 is a flowchart of a method 900 for converting burst losses into isolated losses, in accordance with one embodiment of the present invention" (page 22, lines 23-24). "In step 910, in the present embodiment, media data enters an encoder/packetizer (e.g., encoder/packetizer 320 of Figure 3) where it is compressed, encoded and packetized for future transmission" (page 23, lines 5-7). "In step 930, the selected interleaver then adapts the conventional schedule (numerically sequential) into an adapted or reordered schedule based on characteristics of the channel over which the media is to be transmitted. The adapted schedule is selected to convert burst losses that might occur into isolated losses as received, so as to reduce distortion in the media at a receiver end. The channel characteristics can be determined by a channel characteristics estimator/historical data retriever based on channel data received from the receiver end" (page 23, line 26, through page 24, line 4).

VI. Grounds of Rejection to Be Reviewed on Appeal

1. Claims 16-20, 22-26, 29-34, 36-39, 41 and 42 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,289,054 by Rhee, hereinafter referred to as "Rhee."

2. Claims 1-16, 21, 27, 28, 35 and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rhee in view of U.S. Patent No. 7,058,054 by Clark, hereinafter referred to as "Clark."

VII. Argument

1. Whether Claims 16-20, 22-26, 29-34, 36-39, 41 and 42 are Anticipated Under 35 U.S.C. § 102(e) by Rhee.

Claims 16-20, 22-26, 29-34, 36-39, 41 and 42 stand rejected under 35 U.S.C. §102(e) as being anticipated by Rhee. Appellants have reviewed the cited reference and respectfully submit that the embodiments of the present invention as recited in Claims 16-20, 22-26, 29-34, 36-39, 41 and 42 are not anticipated by Rhee for at least the following rationale.

Appellants respectfully assert that Rhee does not anticipate the embodiments as claimed because Rhee does not satisfy the requirements of a *prima facie* case of anticipation. MPEP §2131 provides:

> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ... "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim.

Appellants respectfully direct the Examiner to independent Claim 16 that recites that an embodiment of the present invention is directed to (emphasis added):

> A schedule adapter for receiving media packets in a first order and transmitting said media packets in a second order wherein said second order is selected to reduce distortion with respect to said first order based on estimated channel characteristics.

Independent Claim 29 includes similar recitations. Claims 17-20 and 22-26 that depend from independent Claim 16, and Claims 30-34, 36-39, 41 and 42 that depend from independent Claim 29 also include these recitations.

Appellants respectfully submit that Rhee is very different from the claimed embodiments. Appellants understand Rhee to teach: "[m]ethods and systems for performing packet loss recovery when transmitting compressed video over a lossy packet-based network include transmitting packets of compressed video data from a sender to a receiver. In response to detecting lost or erroneously received packets, the receiver transmits a retransmission request to the sender. In response to receiving the retransmission request, the sender changes the periodic temporal dependency distance of a frame to be transmitted such that the frame depends on the frame associated with the retransmitted packets" (Abstract;

emphasis added). In particular, Appellants respectfully submit that Rhee does not teach, describe or suggest "[a] schedule adapter for receiving media packets in a first order and transmitting said media packets in a second order" (emphasis added) as claimed.

With reference to Figure 4 of Rhee, Appellants understand Rhee to disclose a system for performing the transmission and retransmission of data packets over a lossy network. Receiver 402 notifies sender 400 of packet loss (col. 5, lines 36-50). Sender 400 then retransmits lost packets (e.g., repair packets) according to a retransmission-based FESCU (col. 6, line 26, through col. 7, line 10) or a FEC-based FESCU (col. 7, lines 11-63). Appellants understand Rhee to disclose transmission of packets and retransmission of a subset of the packets that were lost.

First, Appellants respectfully submit that packets and repair packets as disclosed in Rhee are not "said media packets" as claimed. In contrast, the repair packets are comprised of a subset of the initial packets. In other words, Appellants understand Rhee to disclose that the packets and repair packets are two distinct sets of packets, and thus are not "said media packets" as claimed.

Second, Rhee does not teach, describe or suggest that the order of the repair packets is different than the order of the initial transmission of the packets. In particular, Appellants submit that Rhee is silent as to the order of the packets or the repair packets. Furthermore, even accepting that all packets are lost and require resending, e.g., the repair packets comprise all initial packets, Rhee does not teach, describe or suggest that the repair packets are transmitted in an order different than the initial transmission of the packets.

Appellants respectfully submit that Rhee does not teach, describe or suggest "[a] schedule adapter for receiving media packets in a first order and transmitting said media packets in a second order" as claimed (emphasis added). Accordingly, Appellants respectfully assert that the claimed embodiments are not anticipated by Rhee, since Rhee does not show the identical invention in as complete detail as is contained in the claims.

Appellants respectfully note that the Response to Arguments in the Office Action mailed September 5, 2007, asserts that "Adaptor 414 receives a first order o media packet [sic] via video in" and "adapter 414 compute [sic] the number of FEC repair packets to be

transmitted with the received media packet (a second order)" (see Office Action mailed September 5, 2007, page 6, lines 2-5). As presented above, Appellants respectfully submit that the packets received at sender 400 are different than the repair packets sent by sender 400 to receiver 402. Therefore, Appellants submit that "[a] schedule adapter for receiving media packets in a first order and transmitting said media packets in a second order" as claimed.

In summary, Appellants respectfully submit that Liu does not satisfy the requirements of a *prima facie* case of anticipation, that independent Claims 16 and 29 overcome the rejection under 35 U.S.C. § 102(e), and that these claims are in condition for allowance. Claims 17-20 and 22-26 that depend from independent Claim 16, and Claims 30-34, 36-39, 41 and 42 that depend from independent Claim 29 also include these embodiments. As such, Appellants also respectfully submit that Liu does not show or suggest the additional claimed features of the embodiments as recited in Claims 17-20, 22-26, 30-34, 36-39, 41 and 42, and that these claims are also in condition for allowance as being dependent on an allowable base claim. Therefore, the Appellants respectfully assert that the basis for rejecting Claims 16-20, 22-26, 29-34, 36-39, 41 and 42 under 35 U.S.C. § 102(e) is traversed.

2. Whether Claims 1-16, 21, 27, 28, 35 and 40 are Unpatentable Under 35 U.S.C. § 103(a) by Rhee in view of Clark.

Claims 1-16, 21, 27, 28, 35 and 40 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rhee in view of Clark. Appellants have reviewed Rhee and Clark and respectfully submit that the embodiments of the present invention as recited in Claims 1-16, 21, 27, 28, 35 and 40 are patentable over the combination of Rhee in view of Clark, in view of at least the following rationale.

Claims 35 and 40 are dependent on independent Claim 29. Hence, by demonstrating that Claim 29 is not shown or suggested by Rhee and Clark (alone or in combination), it is also demonstrated that Claims 35 and 40, respectively, are not shown or suggested by Rhee and Clark (alone or in combination).

As presented above in the discussion of the rejection Claims 16-20, 22-26, 29-34, 36-39, 41 and 42, Appellants respectfully submit that Rhee does not show or suggest the embodiments of independent Claims 16 and 29. Appellants submit that independent Claim 1 includes similar recitations. Appellants further submit that Clark does not overcome the shortcomings of Rhee.

As presented above, Appellants respectfully submit that Rhee is very different from

the claimed embodiments. Appellants understand Rhee to teach the retransmission of lost packets over a lossy network. In particular, Appellants respectfully submit that Rhee does not teach, describe or suggest "[a] schedule adapter for receiving media packets in a first order and transmitting said media packets in a second order" (emphasis added) as recited in independent Claim 16, and similar recitations of independent Claims 1 and 29.

First, Appellants respectfully submit that packets and repair packets as disclosed in Rhee are not "said media packets" as claimed. In contrast, the repair packets are comprised of a subset of the initial packets. Moreover, Rhee does not teach, describe or suggest that the order of the repair packets is different than the order of the initial transmission of the packets. Furthermore, even accepting that all packets are lost and require resending, e.g., the repair packets comprise all initial packets, Rhee does not teach, describe or suggest that the repair packets are transmitted in an order different than the initial transmission of the packets. In contrast, by disclosing that statistics/gatherer reporter 412 of Figure 4 periodically sends the receiver report packets, and that repair packets are sent in response to the report packets, Rhee appears to teach away from transmitting packets in a first order an in a second order.

Therefore, Appellants respectfully submit that Rhee does not teach, describe or suggest "[a] schedule adapter for receiving media packets in a first order and transmitting said media packets in a second order" as claimed (emphasis added).

Appellants respectfully submit that the combination of Rhee and Clark does not render the claimed embodiments unpatentable, because Clark does not overcome the shortcomings of Rhee. Appellants understand Clark to disclose a subjective quality monitoring system for packet based multimedia signal transmission systems (Abstract). Appellants respectfully submit that Clark does not teach, describe or suggest "[a] schedule adapter for receiving media packets in a first order and transmitting said media packets in a second order" as claimed (emphasis added).

Moreover, with reference to independent Claim 28 and Claim 12, Appellants respectfully submit that the combination of Rhee and Clark does not teach, describe or suggest "loss characteristics are chosen from a group consisting essentially of: time between losses; number of isolated packet losses; number of sequential packet losses; end-to-end delay for each packet; number of said media packets lost in each of said sequential packet losses; packets received/lost pattern; and time of receipt of each packet" as claimed.

Appellants understand Rhee to disclose a system for performing the transmission and retransmission of data packets over a lossy network. Appellants have reviewed Rhee and respectfully submit that Rhee is silent to loss characteristics including "number of isolated packet losses; number of sequential packet losses; end-to-end delay for each packet; number of said media packets lost in each of said sequential packet losses; packets received/lost pattern; and time of receipt of each packet" as claimed.

Moreover, Appellants respectfully submit that Clark does not overcome the shortcomings of Rhee. In particular, Appellants understand Clark to disclose a subjective quality monitoring system for packet based multimedia signal transmission systems (Abstract). Appellants have reviewed Clark and respectfully submit that Clark is also silent to loss characteristics including "number of isolated packet losses; number of sequential packet losses; end-to-end delay for each packet; number of said media packets lost in each of said sequential packet losses; packets received/lost pattern; and time of receipt of each packet" as claimed.

In summary, Appellants respectfully submit that the combination of Rhee and Clark does not satisfy the requirements of a *prima facie* case of obviousness, that independent Claims 1, 16, 28 and 29 overcome the rejection under 35 U.S.C. § 103(a), and that these claims are in condition for allowance. Claims 2-15 that depend from independent Claim 1, Claims 21 and 27 that depend from independent Claim 16, and Claims 35 and 40 that depend from independent Claim 29 also include these embodiments. As such, Appellants also respectfully submit that Rhee and Clark, alone or in combination, do not show or suggest the additional claimed features of the embodiments as recited in Claims 2-15, 21, 27, 35 and 40, and that these claims are also in condition for allowance as being dependent on an allowable base claim. Therefore, the Appellants respectfully assert that the basis for rejecting Claims 1-16, 21, 27, 28, 35 and 40 under 35 U.S.C. § 103(a) is traversed.

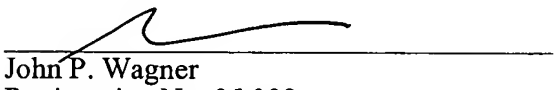
Conclusion

Appellants respectfully submit that pending Claims 16-20, 22-26, 29-34, 36-39, 41 and 42 are not anticipated by Rhee. Appellants respectfully submit that pending Claims 1-16, 21, 27, 28, 35 and 40 are patentable over the combination of Rhee and Clark.

Therefore, Appellants respectfully submit that the rejections of the Claims are improper as the rejection of Claims 16-20, 22-26, 29-34, 36-39, 41 and 42 does not satisfy the requirements of a *prima facie* case of anticipation and the rejection of Claims 1-16, 21, 27, 28, 35 and 40 does not satisfy the requirements of a *prima facie* case of obviousness. Accordingly, Appellants respectfully submit that the rejection of Claims 16-20, 22-26, 29-34, 36-39, 41 and 42 under 35 U.S.C. §102(e) is improper and should be reversed and the rejection of Claims 1-16, 21, 27, 28, 35 and 40 under 35 U.S.C. §103(a) is improper and should be reversed. The Appellants wish to encourage the Examiner or a member of the Board of Patent Appeals to telephone the Appellants' undersigned representative if it is felt that a telephone conference could expedite prosecution.

Respectfully submitted,
WAGNER BLECHER LLP

Dated: 01/07/2008



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VIII. Appendix - Clean Copy of Claims on Appeal

1. A method for transmitting media packets, comprising:

receiving media packets in a first order; and

transmitting said media packets in a second order, wherein said second order is selected according to loss characteristics of a downstream channel, and wherein said second order results in reduced distortion with respect to a predicted distortion from said first order.

2. The method of Claim 1 wherein media packet losses resulting from said second order is in a pattern of isolated losses.

3. The method of Claim 1 further comprising storing said media packets in said first order prior to said transmitting.

4. The method of Claim 1 further comprising determining said second order by a schedule adapter.

5 The system as described in Claim 4 wherein said schedule adapter is an interleaver.

6. The system as described in Claim 4 wherein said schedule adapter is a packet scheduler, said packet scheduler being computer-readable code, said code programmable to perform as an interleaver.

7. The method of Claim 4 further comprising selecting said schedule adapter from a plurality of selectable schedule adapters.

8. The method of Claim 7 further comprising:

predicting for each of said plurality of selectable schedule adapters a corresponding amount of distortion; and

selecting one of said plurality of selectable schedule adapters according to said predicted distortion.

9. The method of Claim 1 further comprising estimating said loss characteristics from channel characteristics data received from a downstream device.

10. The method of Claim 9 wherein said downstream device sends, in real-time, said channel characteristics data corresponding to each packet received, back to a sender system.

11. The method of Claim 9 wherein said downstream device accumulates said channel characteristics data for sending at a predetermined interval.

12. The method of Claim 9 wherein said loss characteristics are selected from a group consisting essentially of:

time between losses;
number of isolated packet losses;
number of sequential packet losses;
end-to-end delay for each packet;
number of said media packets lost in each of said sequential packet losses;
packets received/lost pattern; and
time of receipt of each packet.

13. The method of Claim 12 further comprising predicting distortion produced from various of said loss characteristics in combination with various schedule adapter configurations and storing said predicted distortion results as basis for future selecting of said second order for minimizing said distortion.

14. The method of Claim 1 wherein said selecting said second order is by an interleaver selector.

15. The method of Claim 1 wherein said selecting said second order is by a switch and wherein said switch transmits said media packets alternately among a plurality of downstream channels.

16. A schedule adapter for receiving media packets in a first order and transmitting said media packets in a second order wherein said second order is selected to reduce distortion with respect to said first order based on estimated channel characteristics.

17. The schedule adapter as described in Claim 16 wherein said media packets are stored prior to transmitting.

18. The schedule adapter as described in Claim 16 wherein said second order is determined by an interleaver.

19. The schedule adapter as described in Claim 16 wherein said second order is determined by a packet scheduler, said packet scheduler being computer-readable code, said code programmable to perform as an interleaver.

20. The schedule adapter as described in Claim 16 wherein said schedule adapter is selected from a plurality of schedule adapters.

21. The schedule adapter of Claim 20 wherein, for each of said plurality of selectable schedule adapters, a corresponding amount of distortion is predicted and one of said plurality of selectable schedule adapters is selected according to said predicted distortion.

22. The schedule adapter as described in Claim 16 wherein said channel characteristics are estimated from channel characteristics data received from a downstream device.

23. The schedule adapter as described in Claim 22 wherein said downstream device sends, in real-time, said channel characteristics data corresponding to each packet received, back to said system.

24. The schedule adapter as described in Claim 22 wherein said downstream device accumulates said channel characteristics data for sending at a predetermined interval.

25. The schedule adapter of Claim 16 wherein said second order is selected by an interleaver selector.

26. The schedule adapter of Claim 16 wherein said second order is selected by a switch and wherein said switch transmits said media packets alternately among a plurality of downstream channels.

27. The schedule adapter of Claim 16 wherein distortion produced from various of said loss characteristics in combination with various interleaver configurations is predicted and said predicted distortion results are stored as basis for future selecting of said second order for minimizing said distortion.

28. A channel characteristics estimator configured to receive channel loss data for a downstream channel and estimate loss characteristics of said channel loss data, wherein said loss characteristics are chosen from a group consisting essentially of:

time between losses;

number of isolated packet losses;
number of sequential packet losses;
end-to-end delay for each packet;
number of said media packets lost in each of said sequential packet losses;
packets received/lost pattern; and
time of receipt of each packet..

29. A computer-usable medium having computer-readable code embodied therein for causing a computer system to perform a method of converting burst losses of media packets in a second order into isolated losses in relation to a first order of media packets in a media transmission, comprising:

receiving encoded media packets in said first order; and

transmitting said media packets in said second order that is selected according to loss characteristics of a downstream channel.

30. The computer-usable medium as described in Claim 29 wherein said media packets are stored prior to transmitting.

31. The computer-usable medium as described in Claim 29 wherein said second order is determined by a schedule adapter.

32 The computer-usable medium as described in Claim 31 wherein said schedule adapter is an interleaver.

33. The computer-usable medium as described in Claim 31 wherein said schedule adapter is a packet scheduler, said packet scheduler being computer-readable code, said code programmable to perform as an interleaver.

34. The computer-usable medium as described in Claim 31 wherein said schedule adapter is selected from a plurality of schedule adapters.

35. The computer-usable medium of Claim 34 wherein, for each of said plurality of selectable schedule adapters, a corresponding amount of distortion is predicted and one of said plurality of selectable schedule adapters is selected according to said predicted distortion.

36. The computer-usable medium as described in Claim 29 wherein said loss characteristics are estimated from channel characteristics data received from a downstream device.

37. The computer-usable medium as described in Claim 36 wherein said downstream device sends, in real-time, said channel characteristics data corresponding to each packet received, back to said system.

38. The computer-usable medium as described in Claim 36 wherein said downstream device accumulates said channel characteristics data for sending at a predetermined interval.

39. The computer-usable medium as described in Claim 36 wherein said loss characteristics are chosen from a group consisting essentially of:

time between losses;
number of isolated packet losses;
number of sequential packet losses;
end-to-end delay for each packet;
number of said media packets lost in each of said sequential packet losses;
packets received/lost pattern; and
time of receipt of each packet.

40. The computer-usable medium of Claim 39 wherein distortion produced from various of said loss characteristics in combination with various interleaver configurations is predicted and said predicted distortion results are stored as basis for future selecting of said second order for minimizing said distortion.

41. The computer-usable medium of Claim 29 wherein said second order is selected by an interleaver selector.

42. The computer-usable medium of Claim 29 wherein said second order is selected by a switch and wherein said switch transmits said media packets alternately among a plurality of downstream channels.

IX. Evidence Appendix

None.

X. Related Proceedings Appendix

None.